REMARKS

Claims 1-16 are pending. Of those, claims 1 and 8 are independent.

Claim Rejections Under 35 U.S.C. §112

Claims 5, 9, 13 and 16 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. Applicants traverse.

The Examiner has rejected claims 5 and 13, as well as claims 9 and 16, as not being clear regarding the combination of conditions being recited. Again, Applicants traverse.

One of ordinary skill in the art would have understood from each of claims 5, 9, 13 and 16 that a logical OR relationship was being recited for conditions a) and b) (claims 5 and 13) and (using the Examiner's paraphrasing) conditions (C) and (D) (claims 9 and 16) respectively. In other words, one of ordinary skill in the art would have understood that claim 5 describes an individual process as being an impeding physical process if condition a) and/or condition b) is/are met. As to claims 9 and 16, one of ordinary skill in the art would have understood that a successful type of validation result indicates the conditions (C) and/or (D) as having been met.

In view of the foregoing comments, withdrawal of the §112, second paragraph, rejection is requested.

Rejections Under 35 U.S.C. §102 vis-à-vis '461 Patent & '019 Patent

Beginning on page 3 of the Office Action, the rejection of claims 1-4, 7, 8, 10-12 and 15 under 35 U.S.C. §102(b) as being anticipated by over U.S. Patent No. 5,452,461 to Umekita (the '461 patent). And beginning on page 4 of the Office Action, claims 1-5, 7-13, 15 and 16 are also rejected under §102(b) as being anticipated by U.S. Patent No. 5,584,019 to Kikuchi et al. (the '019 patent). Applicants traverse.

Each of the '461 patent and the '019 patent is directed toward technology for parallelizing a typical source program that otherwise has not been written with parallel execution in mind.

The '461 patent decomposes the source program into a set of paths and then groups the tasks into parallel execution threads, being careful to impose sequential execution of respective threads where necessary. Assuming for the sake of argument that (1) the decomposition of the source program into parallel threads of task execution and (2) a task is analogous to functionalities of individual processes, nothing about the '461 patent discloses that any of the tasks is manifested at least in part by a physical motion. Rather, the '461 patent is concerned solely with allotting different tasks to respective execution threads.

As to the '019 patent, it is assumed for the sake of argument that the state diagram of Fig. 14a could be considered individual processes which comprise a complete process. While some of the states of Fig. 14a are manifested as changes in temperature, none of the states of Fig. 14a (or, for that matter, any other part of the '019 patent) discloses that an individual process is manifested at least in part by physical motion.

A distinction of amended independent claims 1 and 8 over each of the '461 and '019 patents is identifying functionalities of individual processes, one or more of which is manifested at least in part by physical motion. Claims 2-4, 7, 8, 10-12 and 15 depend at least indirectly from claims 1 and 8, respectively, and similarly distinguish over the '461 patent by dependency. Claims 2-5, 7-13, 15 and 16 depend at least indirectly from claims 1 and 8, respectively, and similarly distinguish over the '019 patent.

In the alternative, a distinction of dependent claims 5 and 13 over the '019 patent is that one or more of the individual processes is an impeding physical process.

In view of the foregoing discussion, the respective §102(b) rejections over '461 patent and the '019 patent are improper and Applicants request that they be withdrawn.

Rejection under 35 U.S.C. §102 vis-à-vis '454 Patent

Beginning on page 6 of the Office Action, claims 1-16 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,009,454 to Dummermuth (the '454 patent). Applicants traverse.

The '454 patent is directed towards a technique for combining ladder-type programs and state-type programs in the context of industrial control. The differing natures of such programs are described in lines 25-56 of column 9:

> Industrial controllers are frequently programmed in a "relay ladder" language where instructions are represented graphically by "contacts" and "coils" of virtual relays connected and arranged in ladder-like rungs. ...
> While relay ladder language type programming is well suited to the handling of large amounts of input and output data and the logical relationship governing such data, it is not well adapted to programming control systems that are logically viewed as moving between discreet "states" in response to historical input and output data. The multiple states of such systems are more easily visualized in state-diagram type languages in which the program is not represented as a simultaneous execution of parallel rungs of relays but instead as a series of interlinked states with execution of the program being the passing from one state to another. ...
> These different programming languages, ladder- and state-type, differ primarily in the way they present the programming tasks to the human programmer, ...

Fig. 2 of the '454 patent will be assumed (for the sake of argument) as representing a complete process which comprises a number of individual processes. Applicants will further assume for the sake of argument that Fig. 2 reflects having already identified functionalities of the individual processes. But it is important to understand that Fig 2 is not the result of what is taught by the '454 patent. Rather, Fig. 2 represents a starting point for which there

are separate ladder-type and state-type programs directed to separate aspects of Fig. 2. The '454 patent represents a teaching of how to combine or integrate the respective ladder-type and state-type programs associated with Fig. 2. The '454 patent is silent regarding how Fig. 2 was obtained.

A distinction of amended independent claims 1 and 8 over the '454 patent is generating a respective set of state transitions to represent each functionality. Again, while Fig. 2 might represent some state transitions, nothing about the '454 patent suggests or discloses generating a respective set of state transitions to represent each functionality that has been identified.

Claims 2-7 and 9-16 depend at least indirectly upon claims 1 and 8, respectively, and similarly distinguish the '454 patent.

In view of the foregoing discussion, withdrawal of this §102(e) rejection is requested.

§103 Rejections

Beginning on page 8 of the Office Action, claims 6 and 14 are rejected under 35 U.S.C. §103(a) as being unpatentable over either of the '019 patent or the '461 patent as modified according to U.S. Patent No. 4,579,444 to Pinckney et al. (the '444 patent). Applicants traverse.

As acknowledged by the Examiner, the '444 patent is a teaching of a document feeder that automatically feeds and registers individual document sheets onto a platen within a photocopier. The Examiner interprets such technology as being an example of an automatic replacement machine. Applicants submit that this is an unreasonable interpretation.

It would be unreasonable to interpret an apple as being an example of an orange. Moreover, because apples and oranges are so well known, it would be a sufficient traversal merely to note that an orange is not an apple. Here, the term "automatic placement machine" has a well understood meaning within the art of industrial manufacture. Similarly, the terms "photocopier" and "document feeder" have well understood meanings in the xerographic art.

Hence, it should be a sufficient traversal for Applicants to note that a photocopier is not an automatic placement machine. Further, Applicants challenge the Examiner to find evidence that one of ordinary skill in the art would have regarded a photocopier as an example of the devices falling within the definition of automatic placement machine generally understood by one of ordinary skill in the art of industrial manufacture.

In view of the foregoing discussion, the combination of either of the '461 patent and the '019 patent with the '444 patent is improper. Accordingly, withdrawal of the respective §103 rejections is requested.

CONCLUSION

The issues in the case are considered to be resolved. Accordingly, Applicants again request a Notice of Allowability.
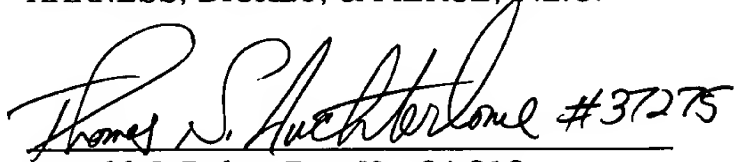
Person to Contact

In the event that any matters remain at issue in the application, the Examiners are invited to contact the undersigned at (703) 668-8000 in the Northern Virginia area, for the purpose of a telephonic interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

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